

APS
08/987 462
5/25/99

[illegible]

FILE 'USPAT' ENTERED AT 15:59:10 ON 25 MAY 1999

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* * * * *
*   U. S.   P A T E N T   T E X T   F I L E
*
*   THE WEEKLY PATENT TEXT AND IMAGE DATA IS CURRENT
*   THROUGH May 25, 1999.
*
* * * * *

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=> s 424/59/ccls

L1 1411 424/59/CCLS

=> s l1 and (sulphonic acid or sulphonate?)

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14319 SULPHONIC
458603 ACID
11314 SULPHONIC ACID
      (SULPHONIC(W)ACID)
12559 SULPHONATE?
L2 125 L1 AND (SULPHONIC ACID OR SULPHONATE?)

```

=> s l2 and (polyglyceryl or diglyceryl or triglyceryl or tetraglyceryl or isolan ci or lameform tgi or hostacerin dgi or dehymls pgph)

```

343 POLYGLYCERYL
164 DIGLYCERYL
132 TRIGLYCERYL
38 TETRAGLYCERYL
126 ISOLAN
22389 CI
    0 ISOLAN CI
      (ISOLAN(W)CI)
    18 LAMEFORM
205 TGI
    2 LAMEFORM TGI
      (LAMEFORM(W)TGI)
    29 HOSTACERIN
    43 DGI
    0 HOSTACERIN DGI
      (HOSTACERIN(W)DGI)
    36 DEHYMULS
    3 PGPH
    0 DEHYMULS PGPH
      (DEHYMULS(W)PGPH)
L3 20 L2 AND (POLYGLYCERYL OR DIGLYCERYL OR TRIGLYCERYL OR TETRAG
LYC ERYL OR ISOLAN CI OR LAMEFORM TGI OR HOSTACERIN DGI OR DEHY
MUL S PGPH)

```

=> s l2 and (polyglyceryl or diglyceryl or triglyceryl or tetraglyceryl or isolan or lameform or hostacerin or dehymls)

```

343 POLYGLYCERYL
164 DIGLYCERYL
132 TRIGLYCERYL
38 TETRAGLYCERYL
126 ISOLAN
18 LAMEFORM
29 HOSTACERIN
36 DEHYMULS
L4 22 L2 AND (POLYGLYCERYL OR DIGLYCERYL OR TRIGLYCERYL OR TETRAG
LYC

```

ERYL OR ISOLAN OR LAMEFORM OR HOSTACIN OR DEHYMULS)

=> s l4 and (tioveil or ((hydrophobic? or coated) (2a) (titanium dioxide or zinc oxide or tio2 or zno or inorganic pigment

UNMATCHED LEFT PARENTHESIS '2A) (TITANIUM'

=> s l4 and (tioveil or ((hydrophobic? or coated) (2a) (titanium dioxide or zinc oxide or tio2 or zno or inorganic pigment?))

UNMATCHED LEFT PARENTHESIS 'OR ((HYDROPHOB'

YOU HAVE RECEIVED THIS ERROR MESSAGE 2 CONSECUTIVE TIMES

The number of right parentheses in a query must be equal to the number of left parentheses.

IF YOU REQUIRE FURTHER HELP, PLEASE CONTACT YOUR LOCAL HELP DESK

=> s l4 and (tioveil or ((hydrophobic? or coated) (2a) (titanium dioxide or zinc oxide or tio2 or zno or inorganic pigment?))

UNMATCHED LEFT PARENTHESIS 'AND (TIOVEIL'

=> s l4 and (tioveil or ((hydrophobic? or coated) (2a) (titanium dioxide or zinc oxide or tio2 or zno or inorganic pigment?)))

25 TIOVEIL
56036 HYDROPHOBIC?
317718 COATED
127908 TITANIUM
166010 DIOXIDE
34796 TITANIUM DIOXIDE
(TITANIUM(W) DIOXIDE)
137524 ZINC
325625 OXIDE
32024 ZINC OXIDE
(ZINC(W) OXIDE)
542 TIO2
14082 ZNO
181130 INORGANIC
99022 PIGMENT?
7644 INORGANIC PIGMENT?
(INORGANIC(W) PIGMENT?)
1493 (HYDROPHOBIC? OR COATED) (2A) (TITANIUM DIOXIDE OR ZINC OXID

E O

R TIO2 OR ZNO OR INORGANIC PIGMENT?)

L5

1 L4 AND (TIOVEIL OR ((HYDROPHOBIC? OR COATED) (2A) (TITANIUM

DIO

XIDE OR ZINC OXIDE OR TIO2 OR ZNO OR INORGANIC PIGMENT?)))

=> d l5 cit a

'A' IS NOT A VALID FORMAT FOR FILE 'USPAT'

ENTER DISPLAY FORMAT (CIT):cit ab

1. 5,188,831, Feb. 23, 1993, Sunscreens containing both water and oil dispersible titanium dioxide particles; Gregg A. Nicoll, et al., 424/401, 59, 63, 69 [IMAGE AVAILABLE]

US PAT NO: 5,188,831 [IMAGE AVAILABLE]

L5: 1 of 1

ABSTRACT:

A composition for topical application to human skin to provide protection from excessive exposure to ultra-violet rays, comprises an effective amount of a sunscreen comprising water-dispersible ultrafine titanium dioxide and oil-dispersible ultrafine titanium dioxide, together with a cosmetically acceptable vehicle for the sunscreen.

=> d 15 kwic

US PAT NO: 5,188,831 [IMAGE AVAILABLE]
US-CL-CURRENT: 424/401, 59, 63, 69

L5: 1 of 1

SUMMARY:

BSUM(76)

Amerchol Corp.

Octyl methoxycinnamate

Octyl salicylate PARSOL MCX Bernel Chemical
 SUNAROME WMO

PABA PABA Felton Worldwide
 National Starch

2-Phenylbenzimidazole-5-sulphonic acid

 EUSOLEX 232 EM Industries

TEA salicylate SUNAROME W Felton Worldwide

3-(4-methylbenzylidene)-camphor

 EUSOLEX 6300

Benzophenone-1 UVINUL. . . EM Industries

DETDESC:

DETD(20)

Ingredients	% w/w
cetyl dimethicone copolyol	
cetyl dimethicone	
polyglyceryl-3-oleate *	5
hexyl laurate	
isopropyl myristate	13.5
beeswax	3
silicone fluid 200	5
preservatives	0.5
titanium dioxide (water-dispersible)	2.5. . .

CLAIMS:

CLMS(1)

We

an effective amount of a sunscreen comprising a mixture of
water-dispersible titanium dioxide exhibiting a hydrophilic surface and
an oil-dispersible **titanium dioxide** exhibiting a
hydrophobic surface, each of said titanium dioxides having an
average particle size of less than 100 nm in total amount said. . .

=> his

'HIS' IS NOT A RECOGNIZED COMMAND

=> d.his

(FILE 'USPAT' ENTERED AT 15:59:10 ON 25 MAY 1999)

L1 1411 S 424/59/CCLS

L2 125 S L1 AND (SULPHONIC ACID OR SULPHONATE?)

L3 20 S L2 AND (POLYGLYCERYL OR DIGLYCERYL OR TRIGLYCERYL OR TET

RAG
L4
RAG
L5
UM

22 S AND (POLYGLYCERYL OR DIGLYCERYL OR TRIGLYCERYL OR TET
1 S L4 AND (TIOVEIL OR ((HYDROPHOBIC? OR COATED) (2A) (TITANI

=> s 14 and (titanium dioxide or inorganic pigment? or zinc oxide or tio2 or
zno)

127908 TITANIUM
166010 DIOXIDE
34796 TITANIUM DIOXIDE
(TITANIUM(W) DIOXIDE)
181130 INORGANIC
99022 PIGMENT?
7644 INORGANIC PIGMENT?
(INORGANIC(W) PIGMENT?)
137524 ZINC
325625 OXIDE
32024 ZINC OXIDE
(ZINC(W) OXIDE)
542 TIO2
14082 ZNO
L6 18 L4 AND (TITANIUM DIOXIDE OR INORGANIC PIGMENT? OR ZINC OXID
E O R TIO2 OR ZNO)

=> s 16 and (coated or hydrophobic? or water-resistan? or waterproof?)

317718 COATED
56036 HYDROPHOBIC?
749246 WATER
636838 RESISTAN?
16549 WATER-RESISTAN?
(WATER(W) RESISTAN?)
18347 WATERPROOF?
L7 14 L6 AND (COATED OR HYDROPHOBIC? OR WATER-RESISTAN? OR WATERP
ROO F?)

=> d 17 cit ab

1. 5,876,702, Mar. 2, 1999, Cosmetic and dermatological light protection
formulations in the form of O/W macroemulsions, O/W microemulsions or
O/W/O emulsions; Heinrich Gers-Barlag, et al., 424/59, 60, 400, 401;
514/937, 938, 939 [IMAGE AVAILABLE]

US PAT NO: 5,876,702 [IMAGE AVAILABLE] L7: 1 of 14

ABSTRACT:

O/W macroemulsions or O/W microemulsions or O/W/O emulsions having a
content of dissolved UV filter substances which are sparingly soluble per
se in oil components, in particular 4,4',4''-(1,3,5-triazine-2,4,6-
trityltriimino) tris-benzoic acid tris (2-ethylhexyl ester), obtainable by
phase inversion technology.

=> d 17 kwic

US PAT NO: 5,876,702 [IMAGE AVAILABLE] L7: 1 of 14
US-CL-CURRENT: 424/59, 60, 400, 401; 514/937, 938, 939

SUMMARY:

BSUM(13)

Other sparingly soluble UV filter substances are also known, for example 2-phenylbenzimidazole-5-**sulphonic acid** and its salts, in particular the sodium, potassium and TEA salt, for example obtainable under the name Eusolex.RTM. 232 from. . .

SUMMARY:

BSUM(31)

Hydrophilic emulsifiers (with high HLB values) are as a rule O/W emulsifiers. Accordingly, **hydrophobic** or lipophilic emulsifiers (with low HLB values) are as a rule W/O emulsifiers.

DETDESC:

DETD(6)

in . . . a UV filter substance which is sparingly soluble per se in oil components, in particular 4,4',4''-(1,3,5-triazine-2,4,6-triyl-triimino)-tris-benzoic acid tris(2-ethylhexyl ester) and/or 2-phenylbenzimidazole-5-**sulphonic acid** or its salts, is present in dissolved form, and

DETDESC:

DETD(12)

According . . . filter substances which are sparingly soluble per se in oil components, in particular of 4,4',4''-(1,3,5-triazine-2,4,6-triyltriimino)tris-benzoic acid tris(2-ethylhexyl ester) and/or of 2-phenylbenzimidazole-5-**sulphonic acid** or its salts, i.e. typically about 5% by weight, based on the total weight of an O/W microemulsion or an. . .

DETDESC:

DETD(13)

An . . . UV filter substances which are sparingly soluble per se in oil components, in particular of 4,4',4''-(1,3,5-triazine-2,4,6-triyltriimino)tris-benzoic acid tris(2-ethylhexyl ester) and/or 2-phenylbenzimidazole-5-**sulphonic acid** or its salts, into emulsions, in particular O/W emulsions, O/W microemulsions or O/W/O emulsions, characterized in that

DETDESC:

DETD(20)

UV filter substances which are sparingly soluble per se in oil components, in particular 4,4',4''-(1,3,5-triazine-2,4,6-triyltriimino)tris-benzoic acid tris(2-ethylhexyl ester) and/or 2-phenylbenzimidazole-5-**sulphonic acid** and its salts,

DETDESC:

DETD(75)

Triglyceryl diisostearate (nomenclature analogous to CTFA: **polyglyceryl** 3-diisostearate), isostearyldiglyceryl succinate, **diglyceryl** sesquiisostearate (nomenclature analogous to CTFA: **polyglyceryl** 2-sesquiisostearate), **triglyceryl** polyhydroxystearate (nomenclature analogous to CTFA: **polyglyceryl** 2-polyhydroxystearate) are also advantageous.

DETDESC:

DETD(88)

UV filter substances which are sparingly soluble per se in oil components, in particular 4,4',4''-(1,3,5-triazine-2,4,6-triyltriimino)tris-benzoic acid tris(2-ethylhexyl ester) and/or 2-phenylbenzimidazole-5-sulphonic acid and its salts,

DETDESC:

DETD(113)

salts of 2-phenylbenzimidazole-5-sulphonic acid, such as its sodium, potassium or its triethanolammonium salt, and the sulphonic acid itself;

DETDESC:

DETD(114)

sulphonic acid derivatives of benzophenones, preferably 2-hydroxy-4-methoxybenzophenone-5-sulphonic acid and salts thereof;

DETDESC:

DETD(115)

sulphonic acid derivatives of 3-benzylidenecamphor, such as, for example, 4-(2-oxo-3-bornylideneirethyl)-benzenesulphonic acid, 2-methyl-5-(2-oxo-3-bornylidenemethyl) benzenesulphonic acid and salts thereof.

DETDESC:

DETD(119)

Cosmetic . . . and/or other metal compounds which are sparingly soluble or insoluble in water, in particular the oxides of titanium (TiO.sub.2), zinc (ZnO), iron (for example Fe.sub.2 O.sub.3), zirconium (ZrO.sub.2), silicon (SiO.sub.2), manganese (for example MnO), aluminum (Al.sub.2 O.sub.3) or cerium (for example . . .

DETDESC:

DETD(120)

It is particularly advantageous in the context of the present invention, although not absolutely necessary, if the inorganic pigments are present in a hydrophobic form, i.e. they have been given a water-repellent treatment on the surface. This surface treatment can comprise providing the pigments with a thin hydrophobic layer by processes known per se.

DETDESC:

DETD(121)

Such a process comprises, for example, a procedure in which the hydrophobic surface layer is produced by a reaction according to $n \text{ TiO}_{2.2} + m (\text{RO})_{3.3} \text{ Si}-\text{R}' \rightarrow n \text{ TiO}_{2.2} (\text{surface})$. n and m here. . .

DETDESC:

DETD(125)

Those . . . advantageously additionally comprise at least one further

UVA filter and/or at least one further UVB filter and/or at least one inorganic pigment, preferably an inorganic micropigment.

DETDESC:

DETD(128)

The . . . resin acid, nordihydroguaiaretic acid, trihydroxybutyrophene, uric acid and derivatives thereof, mannose and derivatives thereof, zinc and derivatives thereof (for example ZnO, ZnSO.sub.4), selenium and derivatives thereof (for example selenium methionine), stilbenes and derivatives thereof (for example stilbene oxide, trans-stilbene oxide) and. . .

DETDESC:

DETD(139)

The cosmetic or dermatological light protection formulations advantageously comprise inorganic pigments, in particular micropigments, for example in amounts of 0.1% by weight to 30% by weight, preferably in amounts of 0.5%. . .

CLAIMS:

CLMS(1)

We . . . filter substance which is sparingly soluble in oil components and selected from the group consisting of 4,4',4''-(1,3,5-triazine-2,4,6-triyl-triimino)-tris-benzoic acid tris(2-ethylhexyl ester), 2-phenylbenzimidazole-5-sulphonic acid, mixtures thereof and its salts, is present in dissolved form, and at least one emulsifier (emulsifier A) having the following. . .

CLAIMS:

CLMS(2)

2. . . and alkenyl esters having carbon chains of 4-24 carbon atoms, monoglycerol monocarboxylic acid monoesters, di- and triglycerol monocarboxylic acid monoesters, triglyceryl monocarboxylic acid monoesters, triglyceryl diisostearate, isostearyl-diglyceryl succinate, diglyceryl sesquiosostearate, triglyceryl polyhydroxystearate, cetearyl isononanoate, dicocoyl-pentaerythrityl distearyl citrate, methicone copolyols, cyclomethicone copolyols, alkylmethicone copolyols, laurylmethicone copolyol, cetyltrimethicone copolyol, branched or unbranched alkylmonocarboxylic. . .

CLAIMS:

CLMS(3)

3. . . one emulsifier selected from the group consisting of sorbitan stearate, sorbitan oleate, glycerylsorbitan stearate, sucrose monostearate, sucrose monolaurate, sucrose palmitate, triglyceryl diisostearate, isostearyl-diglyceryl succinate, diglyceryl sesquiosostearate, triglyceryl polyhydroxystearate, cetearyl isononanoate, dicocoyl-pentaerythrityl distearyl citrate, stearic acid, oleic acid, succinic acid, hexanoic acid (caproic acid), heptanoic acid (oenanthic acid),. . .

CLAIMS:

CLMS(12)

12. . . . which are sparingly soluble per se in oil components and selected from the group consisting of 4,4',4''-(1,3,5-triazine-2,4,6-triyltriimino)-tris-benzoic acid tris(2-ethylhexyl ester), 2-phenylbenzimidazole-5-sulphonic acid, mixtures thereof and its salts, and optionally, further emulsifier substances which are soluble or dispersible in the oily phase, which do. . .

CLAIMS:

CLMS (14)

14. . . . carbon chains of 4-24 carbon atoms, monoglycerol monocarboxylic acid monoesters, di- and triglycerol monocarboxylic acid monoesters, triglycerol monocarboxylic acid monoesters, **triglyceryl** diisostearate, isostearyl-**diglyceryl** succinate, **diglyceryl** sesquiisostearate, **triglyceryl** polyhydroxystearate, cetearyl isononanoate, dicocoyl-pentaerythrityl distearyl citrate, methicone copolyols, cyclomethicone copolyols, alkylmethicone copolyols, laurylmethicone copolyol, cetyldimethicone copolyol, branched or unbranched alkylmonocarboxylic. . .

CLAIMS:

CLMS (15)

15. . . . one emulsifier selected from the group consisting of sorbitan stearate, sorbitan oleate, glycerylsorbitan stearate, sucrose monostearate, sucrose monolaurate, sucrose palmitate, **triglyceryl** diisostearate, isostearyl-**diglyceryl** succinate, **diglyceryl** sesquiisostearate, **triglyceryl** polyhydroxystearate, cetearyl isononanoate, dicocoyl-pentaerythrityl distearyl citrate, stearic acid, oleic acid, succinic acid, hexanoic acid (caproic acid), heptanoic acid (oenanthic acid),. . .

=> d 17 cit ab 2

2. 5,858,997, Jan. 12, 1999, Method and composition for skin lightening; Brian Andrew Crotty, et al., 514/159; **424/59**; 514/844, 846, 945 [IMAGE AVAILABLE]

US PAT NO: 5,858,997 [IMAGE AVAILABLE]

L7: 2 of 14

ABSTRACT:

A method and composition is provided for treating skin to achieve lightening by employing an active of the structure: ##STR1## wherein R is selected from the group consisting of C.sub.1 -C.sub.30 alkyl, cycloalkyl and aryl radicals. Most preferred is acetaminophen.

=> d 17 cit ab 3

3. 5,766,575, Jun. 16, 1998, Method and composition for skin lightening; Brian Andrew Crotty, et al., **424/59**, 47, 60, 62 [IMAGE AVAILABLE]

US PAT NO: 5,766,575 [IMAGE AVAILABLE]

L7: 3 of 14

ABSTRACT:

A method and composition is provided for treating skin to achieve lightening by employing an active of the structure: ##STR1## wherein R is selected from the group consisting of hydrogen, hydroxy and C.sub.1 -C.sub.30 alkyl or aryl groups radicals; and R.sup.1 is selected from the group consisting of hydrogen and C.sub.1

-C.sub.30 alkyl or aryl radicals.

=> d 17 cit ab 4

4. 5,753,210, May 19, 1998, Lotion which is temporarily colored upon application; John McEleney, et al., 424/59, 60, 78.02, 78.03, 400, 401; 514/844, 846, 847, 937, 938, 939, 946, 947 [IMAGE AVAILABLE]

US PAT NO: 5,753,210 [IMAGE AVAILABLE]

L7: 4 of 14

ABSTRACT:

A lotion such as a sunscreen includes a pH indicator which colorizes the lotion until the lotion is applied to the human skin, whereinafter the colored lotion turns clear. A physiologically compatible pH indicator such as phenolphthalein is used which has a red appearance from pH 7.5+ and which has a clear appearance from about pH 7.0 to 7.5, the general pH range of the skin. The invention is suitable for use in any lotion, gel, mousse or medication that is best applied in an even and uniform manner to the skin. Accordingly, one preferred use of the invention is in UV-protecting sunscreens so that a user can ensure even distribution of the sunscreen on the body. In certain aspects of the invention, a cap houses the pH indicator and attaches to a container of the lotion, e.g., a sunscreen. The pH indicator mixes with the lotion as it is applied to the skin. The invention further provides methods of manufacturing sunscreens and the like with a pH indicator that turns substantially colorless upon prolonged contact with the skin.

=> d 17 cit ab 5

5. 5,725,882, Mar. 10, 1998, Vinyl-silicone copolymers in cosmetics and personal care products; Kanta Kumar, et al., 424/486, 59, 63, 69, 403; 514/772.3, 844 [IMAGE AVAILABLE]

US PAT NO: 5,725,882 [IMAGE AVAILABLE]

L7: 5 of 14

ABSTRACT:

Cosmetic compositions are provided containing vinyl-silicone graft or block copolymers of the formula ##STR1##

=> d 17 cit ab 6

6. 5,705,144, Jan. 6, 1998, Cosmetic composition containing retinol and dioic acid; Clive Roderick Harding, et al., 424/59; 514/557, 560, 574, 725, 887 [IMAGE AVAILABLE]

US PAT NO: 5,705,144 [IMAGE AVAILABLE]

L7: 6 of 14

ABSTRACT:

A composition for topical application to human skin in order to promote the repair of photo-damaged skin and/or to reduce or prevent the damaging effects of ultra-violet light on skin and/or to lighten the skin comprising retinol or a derivative thereof and a dioic acid.

=> d 17 cit ab 7

7. 5,690,948, Nov. 25, 1997, Antisebum and antioxidant compositions containing gugulipid and alcoholic fraction thereof; John Patrick McCook, et al., 424/401, 59, 78.03, 195.1; 514/943 [IMAGE AVAILABLE]

US PAT NO: 5,690,948 [IMAGE AVAILABLE]

L7: 7 of 14

al., 424/59; 514/529, 549, 552, 679, 685, 721, 734; 560/220, 259; 568/325, 331, 638, 660, 729 [IMAGE AVAILABLE]

US PAT NO: 5,545,399 [IMAGE AVAILABLE] L7: 10 of 14

ABSTRACT:
A composition for topical application to the skin in order to promote the repair of photo-damaged or aged skin and/or to reduce or prevent damaging effects of ultra-violet light on skin and/or to lighten the skin comprising a hydrocalchone of general structure: ##STR1## wherein R.sub.1, R.sub.2 and R.sub.3, which may be the same or different, represent H, --OH, --OR or --COR (where R is a C.sub.1-20 alkyl group); R.sub.4, R.sub.5, R.sub.6 and R.sub.7, which may be the same or different, represent H or --COR (where R is as herein before defined). Optional additional ingredients include sunscreens and other skin lightening skin lightening agents, particularly retinol or derivatives thereof.

=> d 17 kwic 10

US PAT NO: 5,545,399 [IMAGE AVAILABLE] L7: 10 of 14
US-CL-CURRENT: 424/59; 514/529, 549, 552, 679, 685, 721, 734; 560/220, 259; 568/325, 331, 638, 660, 729

SUMMARY:

BSUM(32)

Bernel Chemical
cinnamate
Octyl salicylate
SUNAROME WMO
PABA
2-phenyl- EUSOLEX 232
EM Industries
benzimidazole-
5-sulphonic acid
TEA salicylate
SUNAROME W
Felton Worldwide
3-(4-methylbenzyl-
EUSOLEX 6300
Em Industries
liden)-camphor
Benzophenone-1
UVINUL 400
BASF Chemical.

SUMMARY:

BSUM(34)

The composition according to the invention optionally can also comprise as a sunscreen ultraine titanium dioxide in either of two forms, namely water-dispersible titanium dioxide and oil-dispersible titanium dioxide.

SUMMARY:

BSUM(35)

Water-dispersible titanium dioxide is ultraine titanium dioxide, the particles of which are uncoated or which are coated with a material to impart a hydrophilic surface property to the particles. Examples of such materials include aluminum oxide and.

SUMMARY:

BSUM(36)

Oil-dispersible **titanium dioxide** is ultrafine **titanium dioxide**, the particles of which exhibit a **hydrophobic** surface property, and which, for this purpose, can be **coated** with metal soaps such as aluminium stearate, aluminium laurate or zinc stearate, or with organosilicone compounds.

SUMMARY:

BSUM(37)

By "ultrafine **titanium dioxide**" is meant particles of **titanium dioxide** having an average particle size of less than 100 nm, preferably from 10 to 40 nm and most preferably from. . .

SUMMARY:

BSUM(38)

By topical application to the skin of a mixture of both water-dispersible ultrafine **titanium dioxide** and oil-dispersible ultrafine **titanium dioxide**, synergically enhanced protection of the skin against the harmful effects of both UV-A and UV-B rays is achievable.

SUMMARY:

BSUM(39)

It is believed that this unexpected benefit is due to the deposition of each type of **titanium dioxide** on different regions of the skin surface, water-dispersible **titanium dioxide** being preferentially retained by hydrophilic regions of the skin's surface, while oil-dispersible **titanium dioxide** is retained preferentially by **hydrophobic** regions of the skin's surface. The combined overall effect is that more efficient physical coverage of the skin's surface is. . .

SUMMARY:

BSUM(40)

In order to achieve the enhanced, synergistic benefit, as herein described, the weight ratio of water-dispersible **titanium dioxide** to oil-dispersible **titanium dioxide** should be from 1:4 to 4:1, preferably from 1:2 to 2:1 and ideally about equal weight proportions.

SUMMARY:

BSUM(41)

The total amount of **titanium dioxide** that can optionally can be incorporated in the composition according to the invention is from 1 to 25%, preferably from. . .

SUMMARY:

BSUM(42)

The compositions of the invention optionally can comprise an inorganic sunscreen in addition to ultrafine **titanium dioxide** as herein defined.

SUMMARY:

BSUM(44)

zinc oxide, having an average particle size of from 1 to 300 nm,

DETDESC:

DETD(16)

Ingredient	% w/w
dihydrophlorethin	2.0
silicone surfactant	10
volatile siloxane	14
mineral oil	1.5
titanium dioxide (water-dispersible)	2.5
titanium dioxide (oil-dispersible)	2.5
2-hydroxyoctanoic acid	1
2-hydroxypropanoic acid	5
butylene glycol	10
sodium chloride	2
1-proline	0.1
neutralising. . .	

DETDESC:

DETD(19)

. . .	8.2
silicone surfactant (DC 3225C)	12
petroleum jelly	0.5
mineral oil	1.5
Parsol MCX (octyl methoxycinnamate)	3
titanium dioxide (oil-dispersible)	2
titanium dioxide (water-dispersible)	2
sodium chloride	2
butylene glycol	10
1-proline	0.1
2-hydroxyoctanoic acid	1
2-hydroxypropanoic acid	5
neutralising agent. . .	

DETDESC:

DETD(22)

. . .	8.2
silicone surfactant (DC 3225C)	12
mineral oil	1.5
petroleum jelly	0.5
Parsol MCX (octyl methoxycinnamate)	1.5
titanium dioxide (oil-dispersible)	1.0
titanium dioxide (water-dispersible)	

2-hydroxyoctanoic acid 1
 2-hydroxypropanoic acid 5
 sodium chloride 2
 butylene glycol 10
 1-proline 0.1
 neutralising agent (aqueous) . . .

DETDESC:

DETD(26)

dihydrophlorethin 1.0
 silicone surfactant (DC 3225C) 10
 volatile siloxane (DC 345) 14
 mineral oil 1.5
 Parsol MCX 3
titanium dioxide (oil-dispersible) 2
titanium dioxide (water-dispersible) 2
 butylene glycol 10
 sodium chloride 2
 1-proline 0.1
 2-hydroxyoctanoic acid 1
 2-hydroxypropanoic acid 5
 neutralising agent. . .

DETDESC:

DETD(29)

Ingredients	% w/w
retinyl acetate	0.2
retinyl laurate	0.2
dihydrophlorethin	0.5
cetyl dimethicone copolyol	
cetyl dimethicone *	
polyglyceryl-3-oleate	5
hexyl laurate	
isopropyl myristate	13.5
beeswax	3
silicone fluid 200	5
preservatives	0.5
titanium dioxide (water-dispersible)	2.5
titanium dioxide (oil-dispersible)	2.5
water	to 100

*available is ABIL W508 ex Goldschmidt

=> d 17 cit ab 11

11. 5,486,353, Jan. 23, 1996, Antisun product; Mario Billia, et al.,
 424/59, 60, 62; 514/21 [IMAGE AVAILABLE]

US PAT NO: 5,486,353 [IMAGE AVAILABLE]

L7: 11 of 14

ABSTRACT:

An antisun product which contains, besides cosmetic auxiliaries and sunscreen agents and/or sun blocks, an effective amount of deproteinized haemodialysate of mammalian blood or an active fraction thereof results in improving the condition of the skin and in reducing or avoiding the adverse effects of exposure to the sun. The composition is suitable for both prophylaxis and aftercare.

=> d 17 kwic 11

US PAT NO: 5,486,353 [IMAGE AVAILABLE]
US-CL-CURRENT: 424/59, 60, 62; 514/21

L7: 11 of 14

SUMMARY:

BSUM(17)

Sun blocks which are suitable are customary inorganic substances and pigments such as kaolin, **zinc oxide**, talc, bentonite, calcium carbonate, magnesium oxide, **titanium dioxide**, iron oxide, magnesium silicate, pearl mica and the like. They reflect and scatter sunlight in the ultraviolet, visible and infrared.

SUMMARY:

BSUM(19)

In accordance with a particularly preferred embodiment, the antisun products according to the invention contain **zinc oxide** and/or **titanium dioxide** as sun blocks. These are non-irritant and, in particular, provoke no allergic responses in the eye and on the lips, thus allowing optimal sun protection for the entire body. The particle size of **titanium dioxide** is preferably less than 35 μm , particularly preferably less than 10 μm , and the particle size of the **zinc oxide** is preferably less than 50 μm , particularly preferably less than 20 μm . Such micropigments and their use are disclosed, for.

SUMMARY:

BSUM(20)

Substances . . . N-substituted p-aminobenzoic acid derivatives, camphor derivatives, cinnamates and benzimidazol derivatives. Examples of suitable compounds are glyceryl p-aminobenzoate, isoamyl p-dimethylaminobenzoate, 2-hydroxy-4-octyloxybenzophenone, 2-hydroxy-4-methoxybenzophenone-5-**sulphonic acid** trihydrate, 2-ethylhexyl 4-phenylbenzophenone-2'-carboxylate, 4-phenylbenzophenone, 2-hydroxy-4-methoxybenzophenone, 2,2'-dihydroxy-4,4'-dimethoxybenzophenone, 2,2',4,4'-tetrahydroxybenzophenone, sodium 2,2'-dihydroxy-4,4'-dimethoxybenzophenone-5-**sulphonate**, propyl p-methoxycinnamate, 2-ethoxyethyl p-methoxycinnamate, 2-ethylhexyl p-methoxycinnamate, isoamyl p-methoxycinnamate, the diethanolamine salt of p-methoxycinnamic acid, sodium 3,4-dimethoxyphenylglyoxylate, 2-phenylbenzimidazol-5-**sulphonic acid**, 5-methyl-2-phenylbenzoxazol, 3-(4-methylbenzylidene)camphor, dibenzalazine, 5-(3,3-dimethyl-2-norbornylidene)-3-penten-2-one, dianisoylmethane and the like. Due to their structure, for example a sufficient number of conjugated double.

SUMMARY:

BSUM(23)

In . . . a protective film, antiinflammatory components, components having a bacteriostatic or fungicidal activity, odoriferous components (in particular perfumes), components which improve **water resistance**, salts (for example sodium chloride), vitamins and/or pigments. A person skilled in the art is also thoroughly familiar with such. . .

DETDESC:

DETD(4)

7.5

Mineral oil	5
Octyl stearate	3
Propylene glycol	2.25
Cetyldimethicone copolyol	2
1-(4-Methoxyphenyl)-3-(4-tert-butylphenyl)-	2
propane-1,3-dione	
3-(4-Methylbenzylidene)camphor	1.5
Polyglyceryl-4 isostearate	1
2-Hydroxy-4-methoxybenzophenone	0.5
Fragrances	0.5
Sodium chloride	0.3
EDTA	0.2
Methylparaben	0.175
Propylparaben	0.075

DETDESC:

DETD(9)

Sun protection lotion with **zinc oxide** and a sun protection factor of 15 composed of:

DETDESC:

DETD(10)

	% by weight
Water	34.2
Zinc oxide	20
Haemodialysate (dry matter content: 40 mg/ml)	19
Cetyldimethicone copolyol/hexyl laurate	5
C.sub.8 -C.sub.10 -Fatty acid glycerides	

DETDESC:

DETD(12)

Sun protection cream (water-in-oil) with **zinc oxide** and **titanium dioxide** and a sun protection factor of 10 composed of:

DETDESC:

DETD(13)

% by weight

Water	55.9
Haemodialysate (dry matter content: 40 mg/ml)	10
Zinc oxide	10
Mineral oil	5
Isopropyl palmitate	3.5
Methylglucoside dioleate	3
Methylgluceth-20	3
Titanium dioxide	3
Propylene glycol	2.5
PEG-45/dodecyl glycol copolymer	1
Mineral oil and aluminium magnesium	1
hydroxystearate	
C38 liquid.	

CLAIMS:

CLMS(5)

5. The antisen product according to any of claim 1, characterized in that it contains **zinc oxide**, **titanium dioxide**, kaolin, talc, bentonite, calcium carbonate, magnesium oxide, iron oxide, magnesium silicate and/or pearl mica as sun block.

CLAIMS:

CLMS(6)

6. The antisen product according to any of claims 1, characterized in that it contains one or more micropigments, preferably **zinc oxide** having a particle size of less than 50 .mu.m and/or **titanium dioxide** having a particle size of less than 35 .mu.m as sun blocks.

=> d 17 cit ab 12

12. 5,244,665, Sep. 14, 1993, Cosmetic composition; Collur V. Natraj, et al., 424/401, 59; 514/785 [IMAGE AVAILABLE]

US PAT NO: 5,244,665 [IMAGE AVAILABLE]

L7: 12 of 14

ABSTRACT:

A composition suitable for topical application to human skin for reducing the damaging effects of ultra-violet light on skin comprises:

- (a) an effective amount of a triester of citric acid having the structure (1): ##STR1## where R.sup.1, R.sup.2, and R.sup.3 each independently represent a branched or unbranched alkyl, alkenyl, aryl, alkylaryl or arylalkyl group, each said group being optionally substituted and having from 1 to 18 carbon atoms, R.sup.4 represents --H, or a branched or unbranched saturated or unsaturated acyl, alkyl, aryl, alkylaryl or arylalkyl group, each said group being optionally substituted and having from 1 to 18 carbon atoms; and
- (b) a cosmetically acceptable vehicle for the citric acid ester; and
- (c) an effective amount of a sunscreen agent, with the proviso that in the case where the sunscreen agent is an inorganic sunscreen, it has an average particle size of less than 100 .mu.m.

=> d 17 kwic 12

SUMMARY:

BSUM(58)

MCX Bernel Chemical
Octyl salicylate SUNAROME WMO
Felton Worldwide
PABA PABA National Starch
2-Phenyl-benzimidazole-
EUSOLEX 232 EM Industries
5-sulphonic acid
TEA salicylate SUNAROME W Felton Worldwide
3-(4-methylbenzylidene)-camphor
EUSOLEX 6300
EM Industries
Benzophenone-1 UVINUL 400 BASF Chemical Co.
Benzophenone-2. . .

SUMMARY:

BSUM(61)

The sunscreen agent according to the invention can optionally comprise an inorganic sunscreen, such as ultrafine **titanium dioxide** in either of two forms, namely water-dispersible **titanium dioxide** and oil-dispersible **titanium dioxide**.

SUMMARY:

BSUM(62)

Water-dispersible **titanium dioxide** is ultrafine **titanium dioxide**, the particles of which are uncoated or which are **coated** with a material to impart a hydrophilic surface property to the particles. Examples of such materials include aluminium oxide and. . .

SUMMARY:

BSUM(63)

Oil-dispersible **titanium dioxide** is ultrafine **titanium dioxide**, the particles of which exhibit a **hydrophobic** surface property, and which, for this purpose, can be **coated** with metal soaps such as aluminium stearate, aluminium laurate or zinc stearate, or with organosilicone compounds.

SUMMARY:

BSUM(64)

By "ultrafine **titanium dioxide**" is meant particles of **titanium dioxide** having an average particle size of less than 100 nm, preferably 70 nm or less, more preferably from 10 to. . .

SUMMARY:

BSUM(65)

By topical application to the skin of a mixture of both water-dispersible ultrafine **titanium dioxide** and oil-dispersible

ultrafine **titanium dioxide**, synergistically enhance protection of the skin against the harmful effects of both UV-A and UV-B rays is achievable.

SUMMARY:

BSUM(66)

It is believed that this unexpected benefit is due to the deposition of each type of **titanium dioxide** on different regions of the skin surface, water-dispersible **titanium dioxide** being preferentially retained by hydrophilic regions of the skin's surface, while oil-dispersible **titanium dioxide** is retained preferentially by **hydrophobic** regions of the skin's surface. The combined overall effect is that more efficient physical coverage of the skin's surface is.

SUMMARY:

BSUM(67)

In order to achieve the enhanced, synergistic benefit, as herein described, the weight ratio of water-dispersible **titanium dioxide** to oil-dispersible **titanium dioxide** should be from 1:4 to 4:1, preferably from 1:2 to 2:1 and ideally about equal weight proportions.

SUMMARY:

BSUM(68)

The total amount of **titanium dioxide** that can optionally be incorporated in the composition according to the invention is from 1 to 25%, preferably from . . .

SUMMARY:

BSUM(70)

The emulsion of the invention optionally can comprise an inorganic sunscreen in addition to ultrafine **titanium dioxide** as herein defined. Preferably the inorganic sunscreen has an average particle size of less than 70 nm, preferably from 10. . .

SUMMARY:

BSUM(71)

Examples of other inorganic sunscreens include: **zinc oxide**, iron oxide, and silica, such as fumed silica, having an average particle size of less than 100 nm, typically from. . .

DETDESC:

DETD(2)

The invention is further illustrated by the following examples; in each formulation, the **titanium dioxide** employed was ultrafine **titanium dioxide** having a mean particle size of from 15 to 25 nm.

DETDESC:

DETD(5)

Ingredient	% w/w
------------	-------

tri-n-butyl citra	2
silicone surfactant	10
volatile siloxane	14
mineral oil	1.5
titanium dioxide (water-dispersible)	2.5
titanium dioxide (oil-dispersible)	2.5
2-hydroxy octanoic acid	1
2-hydroxy propanoic acid	5
butylene glycol	10
sodium chloride	2
1-proline. . .	

DETDESC:

DETD(8)

	8.2
silicone surfactant (DC 3225C)	12
petroleum jelly	0.5
mineral oil	1.5
Parsol MCX (octyl methoxycinnamate)	3
titanium dioxide (oil-dispersible)	2
titanium dioxide (water-dispersible)	2
sodium chloride	2
butylene glycol	10
1-proline	0.1
2-hydroxy octanoic acid	1
2-hydroxy propanoic acid	5. . .

DETDESC:

DETD(11)

	8.2
silicone surfactant (DC 3225C)	12
mineral oil	1.5
petroleum jelly	0.5
Parsol MCX (octyl methoxycinnamate)	1.5
titanium dioxide (oil-dispersible)	1.0
titanium dioxide (water-dispersible)	1
2-hydroxyoctanoic acid	1
2-hydroxypropanoic acid	5
sodium chloride	2
butylene glycol	10
1-proline	0.1
neutralising agent (aqueous. . .	

DETDESC:

DETD(14)

citrate	1
silicone surfactant (DC 3225C)	10
volatile siloxane (DC 345)	14
mineral oil	1.5
Parsol MCX	3
titanium dioxide (oil-dispersible)	2
titanium dioxide (water-dispersible)	2
butylene glycol	10
sodium chloride	2
1-proline	0.1
2-hydroxy octanoic acid	1
2-hydroxy propanoic acid	

DETDESC:

DETD(17)

	2
cetyl alcohol	1.5
soft white paraffin	1.5
silicone fluid 200	5
liquid paraffin	8
glycerin	2
preservatives	0.5
titanium dioxide (water-dispersible)	2.5
titanium dioxide (oil-dispersible)	2.5
water	to 100

DETDESC:

DETD(20)

Ingredients	% w/w
triethyl citrate	2
tri-n-butyl citrate	2
cetyl dimethicone copolyol	
cetyl dimethicone	
polyglyceryl-3-oleate *	5
hexyl laurate	
isopropyl myristate	13.5
beeswax	3
silicone fluid 200	5
preservatives	0.5
titanium dioxide (water-dispersible)	2.5
titanium dioxide (oil-dispersible)	2.5
water	to 100

*Available is ABIL W508 ex Goldschmidt

DETDESC:

DETD(23)

Ingredient	% w/w
2-acetyl tri-n-butyl citrate	2
silicone surfactant	10
volatile siloxane	14
mineral oil	1.5
ultrafine titanium dioxide	5

(water-dispersible)

2-hydroxy octanoic acid	1
2-hydroxy propanoic acid	5
butylene glycol	10
sodium chloride	2
amino. . .	

DETDESC:

DETD(26)

Ingredient	% w/w
2-0-ethyl tri-n-butyl citrate	3
silicone surfactant	10
volatile siloxane	14
mineral oil	1.5
ultrafine titanium dioxide	5

(oil-dispersible)

2-hydroxy octanoic acid	1
2-hydroxy propanoic acid	5
butylene glycol	10
sodium chloride	2
amino. . .	

DETDESC:

DETD(29)

Ingredient	% w/w
tridodecyl citrate	1
silicone surfactant	10
volatile siloxane	14
mineral oil	1.5
ultrafine titanium dioxide	2.5

(water-dispersible)

ultrafine titanium dioxide	2.50
(oil-dispersible)	
2-hydroxy octanoic acid	1
2-hydroxy propanoic acid	5
butylene glycol	10
sodium chloride	2

amino. . .

CLAIMS:

CLMS(7)

7. A composition according to claim 6 wherein the inorganic sunscreen comprises a mixture of water-dispersible and oil-dispersible **titanium dioxide**.

CLAIMS:

CLMS(8)

8. A composition according to claim 7 wherein the **titanium dioxide** has a mean particle size of from 15 to 25 nm.

=> d 17 cit ab 13

13. 5,188,831, Feb. 23, 1993, Sunscreens containing both water and oil dispersible **titanium dioxide** particles; Gregg A. Nicoll, et al., 424/401, 59, 63, 69 [IMAGE AVAILABLE]

US PAT NO: 5,188,831 [IMAGE AVAILABLE] L7: 13 of 14

ABSTRACT:

A composition for topical application to human skin to provide protection from excessive exposure to ultra-violet rays, comprises an effective amount of a sunscreen comprising water-dispersible ultrafine **titanium dioxide** and oil-dispersible ultrafine **titanium dioxide**, together with a cosmetically acceptable vehicle for the sunscreen.

=> d 17 cit ab 14

14. 4,529,587, Jul. 16, 1985, Method of reducing sebum on the hair and skin; Martin R. Green, 424/70.8, 47, 59, 60, 65, 67, 68, DIG.4; 514/387, 769, 770, 778, 781, 784, 846 [IMAGE AVAILABLE]

US PAT NO: 4,529,587 [IMAGE AVAILABLE] L7: 14 of 14

ABSTRACT:

A cosmetically acceptable composition for topical application to human skin or hair in order to reduce greasiness comprises, at a concentration of from 0.0001M to 0.5M, a biotin antagonist which is capable of blocking the activity of the biotin dependent enzyme acetyl-SCoA-carboxylase implicated in sebum production; together with a carrier other than water as an aid to delivering the biotin antagonist to the sebaceous gland.

STN
08/987,468
525799

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SYSTEM BUSY

Connection closed by remote host
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=> file uspatfull caplus kosmet

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=> s sunscreen? or UV filter? or UV absorb?

L1 28102 SUNSCREEN? OR UV FILTER? OR UV ABSORB?

=> s l1 and (polyglyceryl (2a) ?stearate or isolan CI or lameform TGI or hostacerin DGI or dehymls pgph)

LEFT TRUNCATION IGNORED FOR '?STEARATE' FOR FILE 'USPATFULL'

LEFT TRUNCATION IGNORED FOR '?STEARATE' FOR FILE 'KOSMET'

L2 35 L1 AND (POLYGLYCERYL (2A) ?STEARATE OR ISOLAN CI OR LAMEFORM TGI OR HOSTACERIN DGI OR DEHYMULS PGPH)

Left truncation is not valid in the specified search field in the specified file. The term has been searched without left truncation. Examples: '?TERPEN?' would be searched as 'TERPEN?' and '?FLAVONOID' would be searched as 'FLAVONOID.'

If you are searching in a field that uses implied proximity, and you used a truncation symbol after a punctuation mark, the system may interpret the truncation symbol as being at the beginning of a term. Implied proximity is used in search fields indexed as single words, for example, the Basic Index.

=> s l1 and ((polyglyceryl (2a) (isostearate or diisostearate or stearate or sesquiosostearate or polyhyroxystearate or myristate or palmitate) or isolan CI or lameform TGI or hostacerin DGI or dehymls pgph)

UNMATCHED LEFT PARENTHESIS 'AND ((POLYGLYCE'

The number of right parentheses in a query must be equal to the number of left parentheses.

=> s l1 and (((polyglyceryl (2a) (isostearate or diisostearate or stearate or sesquiosostearate or polyhyroxystearate or myristate or palmitate) or isolan CI or lameform TGI or hostacerin DGI or dehymls pgph)

UNMATCHED LEFT PARENTHESIS 'AND (((POLYGLYCE'

The number of right parentheses in a query must be equal to the number of left parentheses.

=> s l1 and (((polyglyceryl (2a) (isostearate or diisostearate or stearate or sesquiosostearate or polyhyroxystearate or myristate or palmitate))) or isolan CI or lameform TGI or hostacerin DGI or dehymls pgph)

UNMATCHED LEFT PARENTHESIS 'AND (('

The number of right parentheses in a query must be equal to the number of left parentheses.

=> s l1 and ((polyglyceryl (2a) (isostearate or diisostearate or stearate or sesquiosostearate or polyhyroxystearate or myristate or palmitate)) or isolan CI or lameform TGI or hostacerin DGI or dehymls pgph)

L3 66 L1 AND ((POLYGLYCERYL (2A) (ISOSTEARATE OR DIISOSTEARATE OR STEARATE OR SESQUIISOSTEARATE OR POLYHYROXYSTEARATE OR

MYRISTATE

OR PALMITATE)) OR ISOLAN CI OR LAMEFORM TGI OR HOSTACERIN DGI OR DEHYMULS PGPH)

=> s l3 and ((hydrophobic? (2a) (inorganic pigment? or titanium dioxide or zinc oxide or tio2 or zno) or tioveil or t 805 or mt 100t or m 160)

UNMATCHED LEFT PARENTHESIS 'AND ((HYDROPHOB'
The number of right parentheses in a query must be equal to the
number of left parentheses.

=> s l3 and ((hydrophobic? (2a) (inorganic pigment? or titanium dioxide or
zinc oxide or tio2 or zno)) or tioveil or t 805 or mt 100t or m 160)

L4 4 L3 AND ((HYDROPHOBIC? (2A) (INORGANIC PIGMENT? OR TITANIUM
DIOXIDE OR ZINC OXIDE OR TIO2 OR ZNO)) OR TIOVEIL OR T 805 OR
MT 100T OR M 160)

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=> d l5 bib ab

L5 ANSWER 1 OF 4 CAPLUS COPYRIGHT 1999 ACS

AN 1998:398181 CAPLUS

DN 129:71941

TI **Sunscreen** compositions containing surface-active mono- or
oligoglyceryl compounds, sulfonated water-soluble **UV**
filters, and optional inorganic micropigments

IN Gers-Barlag, Heinrich; Mueller, Anja

PA Beiersdorf A.-G., Germany

SO Eur. Pat. Appl., 25 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 847750	A2	19980617	EP 97-120617	19971125
	EP 847750	A3	19980715		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	DE 19651478	A1	19980618	DE 96-19651478	19961211
	JP 10175839	A2	19980630	JP 97-356340	19971210
PRAI	DE 96-19651478		19961211		

OS MARPAT 129:71941

AB Title **sunscreen** compns., contg. surfactants

R1O[CH2CH(OR2)CH2O]KR3 [k = 1-8; R1-R3 = H (provided .gtoreq.1 of R1-R3
.noteq. H), aliph. acyl, aliph. C8-24 acyl bearing .ltoreq.3 OH groups,
polyester C(O)R4CHR5(O2CR4CHR5)bO2CR4CHR5OH (R4 = C1-20 alkylene; R5 =
C1-20 alkyl; b = 0-200)], are waterproof and photostable, and provide
improved sun protection factors,. Thus, a **sunscreen** compn.
contained **polyglyceryl-4 isostearate** 3.00,
caprylic/capric triglyceride 5.00, octyldodecanol 5.00, dicaprylyl ether
1.67, benzene-1,4-bis(2-oxo-3-bornylidenemethyl-10-sulfonic acid) 4.00,
hydrophobic TiO2 5.00, glycerin monostearate 2.00,
glycerin 3.00, tocopheryl acetate 1.00, NaOH for pH adjustment, perfume,
preservative, and H2O to 100.00 wt.%.

=> d l5 bib ab 2

L5 ANSWER 2 OF 4 USPATFULL

AN 96:116102 USPATFULL

TI Use of benzazoles **UV absorbers**, new benzazoles and a
process for their preparation

IN Pelzer, Ralf, Furstenberg, Germany, Federal Republic of
Langner, Rolf, Bevern, Germany, Federal Republic of
Surburg, Horst, Holzminden, Germany, Federal Republic of
Sommer, Horst, Holzminden, Germany, Federal Republic of
Krempel, Alfred, Holzminden, Germany, Federal Republic of
Hopp, Rudolf, Holzminden, Germany, Federal Republic of
PA Haarmann & Reimer GmbH, Holzminden, Germany, Federal Republic of
(non-U.S. corporation)
PI US 5585091 19961217
AI US 95-391853 19950222 (8)
PRAI DE 94-4406024 19940224
DE 94-4409689 19940322
DT Utility
EXNAM Primary Examiner: Ivy, C. Warren; Assistant Examiner: Huang, Evelyn
LREP Sprung Horn Kramer & Woods
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 929
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compounds which, per molecule, contain at least 2 benzazolyl groups are
outstandingly suitable as **UV absorbers** for
sunscreen compositions.

=> d 15 kwic 2

L5 ANSWER 2 OF 4 USPATFULL
TI Use of benzazoles **UV absorbers**, new benzazoles and a
process for their preparation
AB Compounds which, per molecule, contain at least 2 benzazolyl groups are
outstandingly suitable as **UV absorbers** for
sunscreen compositions.
SUMM . . . the use of compounds which, per molecule, contain at least two
benzazolyl radicals, e.g. at least two benzimidazol-2-yl radicals, as
UV absorbers in **sunscreen** compositions,
additionally new benzazoles and a process for their preparation by
reaction of difunctional anilines with reactive carboxylic acid
derivatives.
SUMM According to the position of their absorption maxima, **UV**
absorbers for cosmetic and dermatological preparations are
divided into UV-A and UV-B absorbers.
SUMM . . . can lead to problems in the formulation of cosmetic
preparations. The absorption maximum lies in the less hazardous UV-A-I
range. **Sunscreen** products containing dibenzoylmethane
derivatives can additionally leave behind on textiles spots which are
extremely difficult to wash out. It is. . .
SUMM In DRP-676 103, the sodium salt of phenylbenzimidazolesulphonic acid
(absorption maximum: 316 nm) and similar compounds are recommended as
UV absorbers in **sunscreen** compositions for
the human skin. The compounds described, however, do not have the
desired photostability or the desired absorption maximum.
SUMM . . . can also be stably formulated with a low pH (up to pH 4)
without crystallization occurring. Preparations having a high **UV**
absorber content (for example up to 20% by weight) are possible.
It is noticeable that on addition of a base until. . .
SUMM The invention thus relates to the use of compounds which, per molecule,
contain at least two benzazolyl groups, as **UV**
absorbers in **sunscreen** compositions, preferably in
cosmetic and dermatological preparations.
SUMM The compounds to be used according to the invention can be used as
UV absorbers in cosmetic or dermatological
preparations in amounts which prevent the passage of the UV rays
through
the film of the. . .

SUMM The compound to be used according to the information can be employed in the corresponding preparations as the only **UV absorber**; but they can also be employed in combination with other **UV absorbers**--in particular UV-B absorbers, to achieve a UV-A+B wide-spectrum absorption or, with poorly photostable dibenzoylmethane derivatives (e.g. butyl-methoxydibenzoyl-methane or 4-isopropyl-dibenzoylmethane), for. . .

DETD **Sunscreen** milk (O/W)

DETD **Lameform TGI**: triglyceryl diisostearate, supplier 3

DETD **Tioveil** MOTG: 40% strength by weight aqueous dispersion of titanium dioxide, supplier 20

DETD **Sunscreen** lotion (O/W)

DETD A 20% strength preliminary solution, neutralized with sodium hydroxide, was prepared from the **UV absorber** according to formula (I). 15% of this solution was employed, which corresponds to an active content of 3.00% of UV-A. . .

DETD **Sunscreen** cream (O/W)

DETD **Sunscreen** cream (O/W)

DETD **Sunscreen** milk (W/O)

DETD

Constituents	%
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A) Lameform TGI	4.00
Dehymuls HR E 7	4.00
Cetiol S	12.00
Liquid paraffin 65 cp	8.50
Permulin 3220	1.00
Isooctyl p-methoxycinnamate	5.00

DETD Sunscreen lotion (W/O)	
DETD . . . 9	1.00
Elfacos C 26	1.00
Liquid paraffin 65 cp	6.00
Isopropyl diisostearate	7.00
Isooctyl p-methoxycinnamate	7.00
Octyl salicylate	5.00
Tioveil MOTG, 40% strength dispersion	12.50

B) Water, dist.	43.40
Trilon B liq.	0.30
86% Glycol	3.00
Phenonip	0.50
UV-A absorber according.	

DETD **Sunscreen** cream (W/O)

DETD **Sunscreen** lotion (W/O)

DETD **Sunscreen** hydrodispersion gel, emulsifier-free

DETD **Sunscreen** gel

DETD Part C: Add the **sunscreen** filter solutions to the gel part A/B with stirring.

DETD **Sunscreen** spray, non-aerosol

DETD Hair shampoo containing **sunscreen**

DETD Hair gel containing **sunscreen**

DETD Leave-on hair treatment, transparent, containing **sunscreen**

CLM What is claimed is:

1. In a **sunscreen** composition containing a **UV absorber**, the improvement wherein such **UV absorber** has its absorption maximum in the UV-A range, and per molecule contains at least two benzazoly groups and at least. . .
 2. A **sunscreen** composition according to claim 1, wherein the **UV absorber** is of the formula ##STR47## in which Z is a (n+p)-valent organic radical having one or more double bonds in. . .
- m is 0 or 1, n is an integer from 2 to 6, and n+p is at most 6, the

UV absorber containing at least one SO.sub.3 Y group.

3. A **sunscreen** composition according to claim 2, in which Z is
a) an olefinically unsaturated aliphatic C.sub.2 -C.sub.6 -hydrocarbon
radical which can.
4. A **sunscreen** composition according to claim 2, in which Z is
selected from the group consisting of --CH.dbd.CH--,
--CH.dbd.CH--CH.dbd.CH--, ##STR48## phenylene, biphenylene, . . .
5. A **sunscreen** composition according to claim 4, in which X is
NR.sup.6.

=> d 15 bib ab 3

L5 ANSWER 3 OF 4 USPATFULL
AN 94:35363 USPATFULL
TI Suncare compositions
IN Robinson, Larry R., Oxford, CT, United States
Rinaldi, Marie A., Hamden, CT, United States
Gupte, Anil J., Seymour, CT, United States
PA Richardson-Vicks Inc., Shelton, CT, United States (U.S. corporation)
PI US 5306485 19940426
AI US 93-16341 19930211 (8)
RLI Continuation of Ser. No. US 91-696817, filed on 7 May 1991, now
patented, Pat. No. US 5207998
DT Utility
EXNAM Primary Examiner: Ore, Dale R.
LREP Sabatelli, Anthony D.; Dabbieri, David K.
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 978
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are sunscare compositions having enhanced substantivity,
efficacy and the like for protecting the skin from the harmful effects
of ultraviolet irradiation, such as sunburn and sun-induced premature
aging of the skin.

=> d 15 bib ab 4

L5 ANSWER 4 OF 4 USPATFULL
AN 93:35451 USPATFULL
TI Suncare compositions
IN Robinson, Larry R., Oxford, CT, United States
Rinaldi, Marie A., Hamden, CT, United States
Gupte, Anil J., Seymour, CT, United States
PA Richardson-Vicks Inc., Shelton, CT, United States (U.S. corporation)
PI US 5207998 19930504
AI US 91-696817 19910507 (7)
DT Utility
EXNAM Primary Examiner: Ore, Dale R.
LREP Sabatelli, Anthony D.; Dabbieri, David K.; Goldstein, Steven J.
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 958
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are sunscare compositions having enhanced substantivity,
efficacy and the like for protecting the skin from the harmful effects
of ultraviolet irradiation, such as sunburn and sun-induced premature
aging of the skin.